REMARKS

This Amendment, filed in reply to the Office Action dated April 3, 2009, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-12 are currently pending and considered in this application. All of the pending claims are rejected. Claims 1 and 6 are amended herewith. Exemplary support for the amendment may be found at, for example, page 11, lines 4-9. No new matter is added by way of this amendment. Entry and consideration of this amendment are respectfully requested.

Information Disclosure Statement

Applicants thank the Examiner for returning a signed and initialed copy of the PTO Form SB/08 that accompanied the Information Disclosure Statement filed November 26, 2008, indicating consideration of the references therein.

RESPONSES TO REJECTIONS

On page 4 of the Office Action, Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over reference Claims 1-12 of U.S. Patent 6,346,532 to Maruyama ("Maruyama"), in view of U.S. Patent 6,699,860 to Ladouceur et al. ("Ladouceur"), and in further view of JP 2001114736 to Akaha et al. ("Akaha"). Specifically, the Examiner states that Claim 6 of Maruyama is drawn in part to the instant claimed compound: (R)-2-(2-aminothiazol-4-yl)-4'[2-(2-hydroxy-2-phenylethyl) amino]ethyl]acetanilide and Ladoucer teaches methods of treating urologic disorders (i.e., incontinence) comprising administering a beta-3 agonist drug and Akaha teaches beta-3 agonist drugs for treating various conditions, including pollakiuria and urinary incontinence

(abstract). The Office Action further states that although there are differences between the instant claims and the reference claims, one would have been motivated to combine the reference claims with the teaching to treat a patient with a urologic disorder (e.g. incontinence, pollakuria) since the reference claims and the instant claims are directed to the same compounds, which are beta-3 agonist drugs, and Ladoucer and Akaha suggest that beta-3 agonists drugs are useful for treating urologic conditions (e.g. incontinence, pollakiuria).

Furthermore, on page 6 of the Office Action, Claims 1-4, 6-9, and 11-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Maruyama et al. (WO99/20607; equivalent English translation U.S. Patent 6,346,532 B1)("Maruyama"), in view of Ladouceur. On page 8 of the Office Action, Claims 5 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Maruyama in view of Ladouceur and in further view of Akaha. The obviousness rejection is similar to the non-statutory type double patenting rejection discussed above, and thus will be repeated here.

On page 10 of the Office Action, the Examiner asserts that Applicant's arguments with respect to the rejection under section 103(a) was considered, but not persuasive because the claims, which do not recite a dose amount, are not commensurate with the scope of the data, which according to the Examiner shows unexpectedly superior effects at a certain dose. Specifically, the Examiner states that the specification discloses "that intravenous administration of compound A did not affect bladder contraction pressure until the dose of 3 mg/kg and that the effects of compound A is dose-dependent (specification page 21, especially second full para.)."

Furthermore, the Examiner did not find Applicant's argument persuasive because according to the Examiner, Applicants did not compare the effects of CGP-12,177A and

compound A on micturition. Specifically, at page 11 of the Office Action, the Examiner states that Applicant has not provided any objective evidence to show that the drug concentrations used in the carbachol studies correlate with the dose amount of Compound A or CGP 12,177A that is effective in controlling micturition in the cyclophospamide-induced overactive bladder rat model.

Therefore, it appears that the Examiner has maintained the rejection because he considered the superior effects of the claimed subject matter is not in commensurate with the scope of claims and that the specification fails to compare the claimed compound with CGP 12,177, a known compound.

Applicants respectfully traverse both the non-statutory type double patenting rejection and the obviousness rejection for the reasons set forth below.

A. The Claims are Commensurate With the Data Showing Unexpectedly Superior Results

Initially, Applicants submit that Independent Claims 1 and 6 have been amended to recite "a pharmaceutically acceptable amount" of the claimed compound. Exemplary support for such an amendment may be found at page 11, lines 4-9 and page 20, lines 20-25.

Applicants incorporate all the arguments, presented in the Amendment under 37 C.F.R. § 1.111 filed November 26, 2008, related to the patentability of the claimed invention over the references cited in the Action herein by reference.

In this regard, it is noted that the Examiner recognizes that the overactive bladder population is differentiated from diabetes population and has withdrawn the previous reasoning.

However, in the current Office Action, the Examiner relies on Ladouceur as it shows nexus between beta-3 agonist drugs for the treatment of urological disorders, including benign prostatic hyperplasia and incontinence.

Applicants respectfully submit that Ladouceur does not add any new information to the explanation of related art contained in the specification, which describes in detail that then-known beta3 adrenaline receptor agonist such as CGP-12,177A was known to show a bladder relaxation action. In this regard, Applicants reiterate that the presently claimed compound of the instant application shows unexpectedly superior activity compared to CGP-12,177A, and directed the Examiner to the experimental data presented in the specification.

In this juncture, the Examiner asserts that Applicant's arguments with respect to the rejection under section 103(a) was considered, but not persuasive because the claims, which do not recite a dose amount, are not commensurate with the scope of the data.

In response, Applicants offer the following explanations.

As stated in the specification and as common knowledge to one of ordinary skill in the art, the dose of the compound is dependent on the age/sex of the particular subject to be administered to and the route of administration. For instance, Example 2 describes a dose ranging from 0.03 to 3 mg/kg of compound A that is intravenously administered to rats. The specification, at page 11, lines 7-9 states that 0.01mg/kg to 100mg/kg per day may be administered to an adult in the case of oral administration. Thus, the specification provides ample support for the term "pharmaceutically acceptable amount" of Compound A.

It is noted that the Examiner relies on the specification disclosing "that intravenous administration of compound A did not affect bladder contraction pressure until the dose of 3 mg/kg and that the effects of compound A is dose-dependent (specification page 21,

especially second full para.)," to support his position that the data in the specification is not in commensurate with the scope of claims. Applicants respectfully disagree.

Example 2 of the specification of the present application shows the results of rat thythmic bladder contraction measurement test, wherein Compound A, the compound of the claimed invention was intravenously administered in increased doses. The Example recorded the number of times and contraction pressure of bladder contraction during 10 minutes from 5 to 15 minutes after the administration of Compound A. Although page 21, lines 15-20 of the instant specification states that the contraction frequency of rhythmic bladder contraction decreased on a dose-dependent manner and "did not affect the contraction pressure until intravenous administration of 3 mg/kg (Fig. 4)," the example is related to evaluating side effects by measuring the bladder contraction. The bladder contraction measurement is an index for evaluating side effects. In other words, the bladder contraction measurements shown in Figure 4 was performed to evaluate side effects of the instant compound, such as ischuria (a condition where urination is impossible), and is not related to the treatment of overactive bladder. That is, decrease in this contraction pressure is an index which teaches that a sufficient contraction power of the detrusor muscle is not shown when the patient wishes to urinate, resulting in incapability of urination or difficulties in urination. If the detrusor muscle contracting power is not sufficient during urination, urination action becomes insufficient ands as a result, the residual urine volume increases or sometimes ischuria occurs.

Accordingly, as the present specification states, the fact of no influence on the contraction pressure is an advantageous property of the claimed compound from the viewpoint that side effects such as urinary retention or residual urine upon urination do not occur. See page 21, lines 17-19. In particular, the fact that the contraction pressure is not changed at a

dose which can reduce the number of contractions (i.e., dose at which overactive bladder treatment is attained) shows that Compound A is an excellent active ingredient of the present invention, as there is no risk of ischuria or increase in the residual urine volume even at a dose showing sufficient pharmacological effects.

Accordingly, the Examiner's statement that the data of unexpected effects are not in commensurate with the scope of the claims is not sustainable. Furthermore, as discussed in further detail below, the specification discloses that the compound of the present invention, at a pharmaceutically acceptable dose, depending on age, sex and/or route of administration, has unexpectedly superior results when compared to a known β3 receptor agonist.

B. Comparison between Applicant's Claimed Invention and known compound

It is also noted that the Examiner alleges that Applicants did not compare the effects of CGP-12,177A and compound A on micturition.

In response, Applicants respectfully submit that at least Example 1 of the instant application compares the effects of a known agent for treating overactive bladder, CGP-12,177A, which is an adrenaline β3 receptor agonist, to the compound recited in the claims of the instant application. Example 1 of the present specification discloses an isolated rat bladder smooth muscle relaxation test, which one of ordinary skill in the art would recognize is an accepted and well-known experiment for measuring the strength of an agent for treating overactive bladder. The test described in at least Example 1 also discloses the agonist action of a test compound for the adrenaline β receptor. Applicants indicate that the claimed compound performs at a 270-fold higher activity than that of CGP-12,177A in the comparison of the concentration which shows maximum relaxation in the carbachol contraction antagonizing test

and 393-fold higher activity than that of CGP-12,177A in the comparison of the concentration which shows maximum relaxation in the potassium chloride contraction antagonizing test.

Accordingly, Applicants have disclosed the superiority of the active ingredient of the present invention against CGP-12,177A, as an agent for treating overactive bladder.

As such, it is believed that the rejection of claims 1 and 6 are not sustainable. For the same reasons, claims 2-5 and 7-12, which directly or indirectly refer to claims 1 or 6, are also patentable.

Withdrawal of the rejections and favorable reconsideration of the application are respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number **202-775-7588**.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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